a very economical food. I am not alone—Professor Jenkins, of Connecticut, assisted by three or four other eminent chemists, rates it at $2.66 per ton above cornmeal and $2.61 above oatmeal or ground oats. I regard good feed, comfortable surroundings and the best of care indispensable in making a cow profitable. Some of us can remember when cows had to lean against straw stacks in winter, with no other shelter, with only a little hay on the ground for bedding, and in summer they had to run with sheep or colts. But those times are passed, and a majority of dairymen now-a-days put their cows in the stable 365 days in a year—and this year one more. Yet, I am sorry to say, a few follow in the footsteps of their illustrious predecessors. 4. And lastly. It pays to feed cows grain in summer because of their better condition as the result of the feeding.—*Dairy World.*

MILKING A COW.

M. J. N Muncey of Iowa contributes to the *Farmer's Review* the following sensible article:

Almost every young man who offers his services to farmers will say in reply to the question, "Can you milk"? "Yes, I have done the milking at home; I think I can suit you." Very few, however, are experts at that work. Very few know how to milk the easiest, quickest and manage the different cows to the best advantage. It is not to be wondered at. The farmers themselves have not usually given their sons any instructions in milking. They seem to think that if the boy can get the milk into the pail that is all that is necessary. Did you ever think that there is as much science in milking a cow as there is in sticking a hog? Not every man can properly stick a hog in a pork-packing establishment. Practice and study of the employés have made them experts. It is just so in milking. Let me give actual illustrations: One man places the stool at the side of the cow, just where he wants it, being careful that the stool should occupy a firm "posish." He then seats himself carefully, takes hold of a teat and the cow steps around about a foot out of his way, and he must either move the stool or reach too far. He moves. The difference between this performance and that of an expert is that the latter sits down in almost any good position, adjusting himself and stool to the easiest position until the cow has moved. Knowing the habits of each cow he takes hold of a teat before he is fully seated. By so doing he saves ten to fifteen minutes in milking as many cows. The difference in cows demands a difference in the mode of operation. Some cows have very sensitive teats. Others are apparently quite free from any sensation. Usually a hard milker is not sensitive in the teat. Some men squeeze the teat much harder than is necessary, being careful to get all the milk in the milk tube at each squeeze. Such milkers are usually slow and make hard work of it. Look at the question philosophically. A certain amount of muscular energy is needed to get an ounce of milk in a certain time. Is it easier and quicker to give three short squeezes or one or two long hard ones to obtain the required amount? The question may at first appear laughable but it is full of meaning. Is it easier and quicker to haul two loads of one ton each six miles on rough roads or take the two tons at one load? The answer is, of course, take a ton at a load, the team will not be worried or exhausted as much. The same is true of milking. You are exerting your muscles as much to obtain the last small amount of milk in the milk tube as you would probably to squeeze twice more and obtain three or four times the amount of milk. Some men are careless about how they sit. One man sits with his left leg stretched out in the alley. He proposes to let the cow put her foot in the pail without even an extra exertion if she wants to. Another man sits close to the cow and in very good position except that his left knee is placed at the side and not in front of the cow's right. Some cows are so very gentle, almost any position is all right; others lift their feet so high, because of sore teats or through habit, that a man must give close attention to the cow's legs, or he will surely spill some milk, three times out of ten. I have noticed that some men are "good milkers," but fail to hold the pail far enough under the cow to catch all the milk. That's bad. True, only a few ounces lost in milking eight or ten cows, each time, but it is no small item in a year. Suppose only half an ounce per cow per milking is milked on the floor. That amounts to 230 pounds of milk per year, worth about $2 in Iowa. And then, too, if it is the last milk in the udder that is carelessly squirted at the side of the pail and on the floor, the loss is two or three times as great, because the last milk that flows contains two to four times as much cream as the first. Good judgment is needed to tell when to quit milking. A cow giving fifty pounds of milk in twenty-four hours, secretes more than two pounds per hour, or one half ounce per minute. A slow man might milk all day. A slow milker teaches a cow bad habits. She soon gives her milk down too fast. Change the milker and the expert is at a disadvantage. She fails to let the milk down as fast as he can milk. Every man who gets cash for his work and fails to milk his cows clean, ought to wear around his neck or on his watch-chain a leather badge on which is printed, "Discharged because I stole." After thirty year's experience, my neighbor says: "I would rather a man would steal from my pocket-book than neglect to milk a cow clean." A man ought to milk on an average eight cows, giving 120 pounds per milking, in one hour. Comparatively few men can do it.

Estimate of Carcase Weight.

In your paper of December 22nd, 1884, you very kindly (on page 776) reviewed, in very favourable terms, a paper I had read before the Marshbrook Farmers' Club, in which I gave a table for estimating value of cattle and sheep by live weight, amongst other things, advocating selling "store and fat animals by live weight." Sir John Lawes also wrote me:—"One of the most practical and sensible papers ever read before a farmers' club," and I had considerable correspondence with him on the cattle-weighing question. Since then I have still gone on pressing the subject on farmers at every opportunity, and I gave Mr. Westley Richards considerable information when the Weighing of Cattle Bill was before Parliament, as he was urging members to support it. I had arranged tables for my own use, and found the simple one which I now enclose you a very useful one, and I determined to publish it, and wrote to Sir J. B. Lawes, when I found he was also about publishing some. I think his stables, with some slight additions which I have suggested to him, will be most complete, and very useful; but you know the difficulty there is in getting farmers to look at any tables of any kind. They do all the reckoning in their heads. Now, the machines as put up weigh by the hundred weight, and I found in practice that I could easily, in my head, reckon the value of an animal from this at once if I had the price per cwt., so I have adopted this, and use nothing myself, or my bailiff, but the pocket-table at the machine. If we could get the price of live weight quoted per stone of 14 lb. or per cwt., it would be a fact which people could rely upon. The present quotations of per lb. or per stone of 8 lb. dead weight are not facts. If a farmer saw that beasts made so much per stone or per cwt. alive he could weigh his own, and know their value; as it is he has to guess at it. I do not look upon it as a thing impossible that we may in time come to sell by